

REMARKS

Claims 1 through 4, 6 through 10, 12 and 14 through 25 are pending in this Application. Claims 1, 12 and 14 have been amended, claims 11 and 13 cancelled and new claims 24 through 25 added. Care has been exercised to avoid the introduction of new matter. Indeed, adequate descriptive support for the present Amendment should be apparent throughout the originally filed disclosure.

Applicants regret a clerical misdesignation of layers in the previous claims. The present Amendment corrects such a clerical misdesignation. Specifically, claim 1 now recites a “first optical guide layer” replacing “an optical layer” corresponding to the p-side optical guide layer, and claim 11 cancelled. In addition, the “third nitride-based semiconductor layer” in claims 12 and 14 is replaced by “first optical guide layer.” New claims 24 and 25, dependent upon independent claim 1, include a “second undoped optical guide layer” which replaces the “fourth nitride-based semiconductor layer” corresponding to the n-side optical guide layer. Thus, the present Amendment merely clarifies the claimed invention consistent with the originally disclosed embodiments and facilitates a better understanding of the claims when read in light of the disclosed embodiments. Applicants submit that the present Amendment does not generate any new matter issue.

Claim 12 was rejected under the second paragraph of 35 U.S.C. § 112.

In the statement of the rejection the Examiner asserted a lack of antecedent basis for “the interspaces.” This rejection is traversed.

Initially, the mere identification of a perceived lack of literal antecedent basis does not automatically trigger a rejection under the second paragraph of 35 U.S.C. § 112 which is a question of law. *Bose Corporation v. JBL, Inc.*, 274 F.3d 1354, 61 USPQ2d 1216 (Fed. Cir. 2001).

At any rate, claim 12 has been amended to address the antecedent basis issue identified by the Examiner, thereby overcoming the stated basis for the imposed rejection. Clearly, one having ordinary skill in the art would have no difficulty understanding the scope of the claimed invention, particularly when reasonably interpreted in light of and consistent with the written description of the specification. *Miles Laboratories, Inc. v. Shandon, Inc.*, 997 F.2d 870, 27 USPQ2d 1123 (Fed. Cir. 1993).

Applicants, therefore, submit that the imposed rejection of claim 12 under the second paragraph of 35 U.S.C. § 112 is not viable and, hence, solicit withdrawal thereof.

Claims 1 through 4, 6, 7, 11, 12, 14 and 23 were rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by Tanizawa et al.

In the statement of rejection the Examiner referred to Figs. 1 through 5 and 8 of Tanizawa et al., and to portions of the patent text, asserting the disclosure of a nitride-based semiconductor light-emitting device corresponding to that claimed. This rejection is traversed.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the identical disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Dayco Prods., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 66 USPQ2d 1801 (Fed. Cir. 2003); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917

(*Fed. Cir. 2002*). When imposing a rejection under 35 U.S.C. § 102 the Examiner is required to specifically identify where an applied reference discloses the identically claimed invention, particularly where such is not apparent as in the present case. *In re Rijckaert*, 9 F.3d 1531, 28 USPQ2d 1955 (*Fed. Cir. 1993*); *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481 (*Fed. Cir. 1984*). That burden has not been discharged. Indeed, there are significant differences between the claimed light-emitting device and the device disclosed by Tanizawa et al. that scotch the factual determination that Tanizawa et al. disclose a light-emitting device identically corresponding to that claimed.

Initially, even without the present Amendment, Applicants submit that the Examiner did not point out where Tanizawa et al. disclose a device identically corresponding to that claimed. Specifically, the Examiner merely pointed to isolated features in Figs. 1 through 5 and 8 of Tanizawa et al. But these are different embodiments and different devices – not a single device. Indeed, Fig. 1 of Tanizawa et al. is directed to a first embodiment; Fig. 2 is a device according to an Example 2; Fig. 3 is a perspective according to Example 16; and Figs. 4, 5 and 8 are directed to second, third, and fifth embodiments, respectively. This approach of inviting arbitrary picking and choosing among different embodiments of a reference to retrospectively arrive at a claimed invention does not satisfy the Examiner's burden of establishing a *prima facie* case of lack of novelty under 35 U.S.C. § 102. See, for example, *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (*Fed. Cir. 1992*); *Air Products & Chemicals, Inc. v. Charles S. Tanner Co.*, 219 USPQ 223 (D.S.C. 1983); *In re Arkley*, 455 F.2d 586, 172 USPQ 524 (CCPA 1972); *In re Kollman*, 595 F.2d 48, 201 USPQ 193 (CCPA 1979).

Applicants would point out that in accordance with the Fig. 3 embodiment of Tanizawa et al., the active layer 56 is formed on the waveguide of 55. However, in accordance with the claimed invention, the optical waveguide is formed on the active layer – the reverse.

Applicants would further note that in paragraph [0199], Tanizawa et al. disclose that a p-contact layer 208 has a superlattice structure formed by alternatively depositing a first nitride semiconductor layer 208a and a second nitride semiconductor layer 208b. In Fig. 5 of Tanizawa et al., a first nitride semiconductor layer 208a is in contact with a p-electrode 10. Further, in paragraph [0450], Tanizawa et al. disclose a first nitride semiconductor layer 208a made of undoped InGaN having a thickness of 30Å. Clearly, Tanizawa et al. neither disclose nor suggest a structure having an undoped layer InGaN at a thickness of 30Å in contact with a p-electrode.

Applicants would further note that Fig. 3 of Tanizawa et al. is a perspective according to Example 16, and Fig. 5 corresponds to a third embodiment. As previously argued, these are completely different structures, and the Examiner cannot identify features in these unrelated structures and then announce the factual determination of lack of novelty under 35 U.S.C. § 102 which requires the disclosure of the identically claimed invention, not bits and pieces begging arbitrary and retrospective combination. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, *supra*; *In re Kollman*, *supra*; *Air Products & Chemicals, Inc. v. Charles S. Tanner Co.*; *In re Arkley*, *supra*.

The above argued differences between the claimed nitride-based semiconductor light-emitting device and the device disclosed by Tanizawa et al. undermine the factual determination that Tanizawa et al. disclose a nitride-based semiconductor light-emitting device identically corresponding to that claimed. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, *supra*; *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81

(*Fed. Cir. 1986*). Applicants, therefore, submit that the imposed rejection of claims 1 through 4, 6, 7, 11, 12, 14 and 23 under 35 U.S.C. § 102 for lack of novelty as evidenced by Tanizawa et al. is not factually viable and, hence, solicit withdrawal thereof.

Claims 1 through 4, 6, 7, 9, 15 and 23 were rejected under 35 U.S.C. § 103 for obviousness predicated upon Kwak et al. in view of Nagahama et al.

In the statement of the rejection the Examiner referred to Figs. 9 through 12 of Kwak et al., asserting the disclosure of a nitride-based semiconductor light-emitting device comprising elements corresponding to those claimed except for an optical guide. The Examiner then concluded that one having ordinary skill in the art would have been motivated to modify the device disclosed by Kwak et al. by providing an optical guide on the active layer in view of Nagahama et al., referring to Fig. 5., Element 8 and Element 6. Still not there, the Examiner further concluded that one having ordinary skill in the art would have been motivated to optimize the thickness of the undoped contact layer 164 in the device disclosed by Kwak et al. This rejection is traversed.

The nitride-based semiconductor light-emitting device defined in independent claim 1 comprises, *inter alia*, a first undoped optical guide layer formed on the active layer. No such structure is disclosed by either of the applied references. Accordingly, even if the applied references are combined as proposed by the Examiner, and Applicants certainly do not agree that the requisite fact-based motivation has been established, the claimed invention would **not** result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (*Fed. Cir. 1988*).

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Applicants, therefore, submit that the imposed rejection of claims 1 through 4, 6, 7, 9, 15 and 23 under 35 U.S.C. § 103 for obviousness predicated upon Kwak et al. in view of Nagahama et al. is not factually or legally viable and, hence, solicit withdrawal thereof.

Claim 16 was rejected under 35 U.S.C. § 102 for lack of novelty as evidenced by Tanizawa et al. in view of Nagahama et al.

This rejection is traversed. Specifically, claim 16 depends from independent claim 1. Applicants incorporate herein the arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. § 102 for lack of novelty as evidenced by Tanizawa et al. The secondary reference to Nagahama et al. does not cure the previously argued deficiencies of Tanizawa et al. Accordingly, even if the applied references are combined as suggested by the Examiner, and Applicants do not agree that the requisite fact-based motivation has been established, the claimed invention would not result. *Uniroyal, Inc. v. Rudkin-Wiley Corp., supra*.

Applicants, therefore, submit that the imposed rejection of claim 16 under 35 U.S.C. § 103 for obviousness predicated upon Tanizawa et al. in view of Nagahama et al. is not factually or legally viable and, hence, solicit withdrawal thereof.

New claims 24 and 25

New claims 24 and 25 are clearly free of the applied prior art by virtue of their dependence upon independent claim 1, the patentability of which has been argued *supra*. Moreover, Applicants separately argue the patentability of claims 24 and 25 based upon the limitations expressed therein, notably the requirement for a second undoped optical guide layer formed between the first nitride-based semiconductor layer and the active layer (claim 24), and

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the requirement for the second undoped optical guide layer to have a thickness smaller than the thickness of the first undoped optical layer (claim 25). Accordingly, claims 24 and 25 are clearly free of the applied prior art.

Based upon the foregoing it should be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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